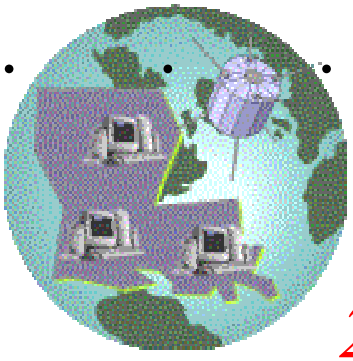
Louisiana Technology Innovations Fund



2002 Annual Report

Louisiana Technology Innovations Fund

Annual Report to the Legislature

> *"Using new technology does not make a project innovative. Applying technology in new ways to improve the efficiency and effectiveness of citizen services is what we are looking for."*
>
> **Chad McGee, Acting CIO**

Executive Summary

As of April, 2002 seventy-two projects had been received by the Technology Innovations Fund Council for consideration. Twenty-five were selected for funding. They are as follows:

Log #	Project	Agency	Funding Approved	Amount Paid	Status as of 04/01/02
98-003	Point of Sale Hunting and Fishing	Wildlife and Fisheries	$864,671	$775,684	Complete
98-005	On-line Insurance Reporting	Public Safety	$98,888	$98,888	Complete
98-007	Distance Learning	Military	$607,000	$607,000	Complete
98-007c	Skycell Satellite	Military	$544,000	$544,000	Complete
98-009	Patient Biometrics	LSU Medical Center, NO	$862,500	$3,588	Terminated
98-010	High Performance Computing System	LSU, BR	$989,383	$962,297	Complete
98-016	Campus Walls	LSU, Eunice	$176,422	$176,422	Complete

Log #	Project	Agency	Funding Approved	Amount Paid	Status as of 04/01/02
98-017	Multi-media Internet	Wildlife and Fisheries	$67,410	$54,461	Complete
99-001	Internet-based Video Conferencing	LSU Medical, Shreveport	$765,010	$765,000	Complete
99-004	Louisiana Treasures	LSU, BR and UNO	$198,078	$184,974	Complete
99-005	Lab for Info Technology and Spatial Analysis	UNO	$449,700	$449,700	In process, extension granted until 5/31/2002
99-006	OCDD Telemedicine	Health and Hospitals	$956,982	$895,160	Complete
99-012	LA E-mall	Division of Administrati on	$925,000	$920,095	Complete
99-014	Web-based Data Warehouse	Education	$1,000,000	$297,300	In process
99-015	X-Band Satellite Ground Station	LSU, BR	$970,795	$436,798	In process, extension granted until 3/31/2003
99-016	Training Today's Students for Tomorrow's Work Environment	LSU, BR	$275,000	$74,177	In process, extension granted until 6/30/2002
01-001	Mobile Data Terminals	Wildlife and Fisheries	$1,000,000	0	Approved
01-002	Saving Lives and Enhancing Efficiency: Managing Medications and Medical Supplies	LSU, Shreveport	$950,000	0	Approved
01-003	A Prototype Enterprise Application Hosting Service	LSU, BR	$431,900	0	Approved

Log #	Project	Agency	Funding Approved	Amount Paid	Status as of 04/01/02
02-001	State Trooper Mobile Office	Public Safety	$361,400	0	Approved
02-002	Fire Marshall Information Management System	State Fire Marshall	$1,000,000	0	Approved
02-010	LouisianaMAP	E-Services	$472,175	0	Approved
02-011	Louisiana e-Government Portal	E-Services	$998,590	0	Approved
02-013	Statewide Learning Management System	CPTP	$386,000	0	Approved
02-014	Prototype for Centralized E-Mail	OIT	$949,200	0	Approved

Budget Status

Fund Balance as of April 1, 2000			$4,459,930
Increases in Revenue/Income			
	Act 21 of 2000 Regular Session (Land Based Casino)	$1,500,000	
	Act 1182 of 2001 Regular Session	$1,000,000	
	Interest Earnings	$981,548	$1,481,548
Expenditures /Obligations			
	Expenditures	$2,055,866	
	Obligations	$3,430,538	$5,486,404
Fund Balance as of April 1, 2002			**$455,074**

Accomplishments

- Two Council members replaced outgoing members as designated by the state government entities specified in the enabling legislation:
    - Chad McGee, Acting CIO, replaced Chairperson Don Hutchinson.
    - Dominic Cali replaced William Beyer.
- The current Council membership is as follows:
    - Chad McGee, Acting CIO, Division of Administration
    - Dominic A. Cali, IT Director, Department of Transportation
    - Jerry Guillot, Chief of Staff, Senate Office
    - Bob Harper, Undersecretary, Department of Natural Resources
    - Butch Speer, Clerk of the House, House of Representatives
- Administrative guidelines and processes, including forms and proposal formats, were revised to:
    - Clarify reporting requirements,
    - Update data on forms
- During 2000 and 2001, six requests for funding were received by the Council and three were awarded funding. In March, 2002, fourteen requests for funding were received by the Council and six were awarded funding. To date, eleven of the 24 funded projects have been completed within or under budget.
- The LTIF Web site, which is accessible on the Internet at http://www.doa.state.la.us/ltif/index.htm under *Info Louisiana* is being maintained to reflect the current status of the fund and recent activities. The site was updated to include current progress status and progress reports for each project.

Project Summaries and Highlights

The LTIF was established to support innovative and exemplary projects that significantly contribute to the state's technology infrastructure and/or provide creative and concrete solutions for improving citizens' services. The nineteen projects funded by the LTIF represent a cross-section of worthy projects. A summary description and highlights for each project follows:

Department of Wildlife and Fisheries

Point of Sale Hunting and Fishing Licenses

Log #: 98-003

Status: Complete

This project automated the sale of hunting and fishing licenses in Louisiana through the implementation of an electronic "Automated Sportsman's Data System (ASDS)", a/k/a "Point of Sale (POS)" system, to issue licenses at stores as well as over the telephone. This system is on-line and operates 24 hours per day, 7 days a week (24x7) in real time.

The system:

- Validates and accepts or denies without clerical discretion
- Captures license buyer and sales data
- Updates the Wildlife & Fisheries data base
- Assigns an identification number to the licensee
- Prints a durable license at the POS
- Utilizes cash concentration and Automated Clearing House (ACH) debits to transfer revenue on a timely basis
- Issues bulletins to the POS terminals
- Conducts surveys such as the federal Harvest Information Program (a migratory bird survey)
- Provides a wealth of demographic data to Wildlife & Fisheries for its confidential use
- Provides for credit card purchases of licenses over the telephone and on the internet

In addition to locations at license retail vendors statewide, POS terminals are located at certain parish sheriff's offices and Wildlife & Fisheries offices in Baton Rouge and New Orleans.

Highlights:

- As of January 2002, 1,105 license vendors were connected and issuing on-line licenses through the POS system.
- Wildlife & Fisheries has issued 3,565,139 licenses on the ASDS/POS system since inception.
- In the license year 2000-2001, 1,728,382 licenses were issued and the system cost $1,353,441 to operate. Under the old license system, the same number of licenses sold would have cost $2,770,765, thus saving Wildlife & Fisheries and the State over $1 million.

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Department of Public Safety

Louisiana On-Line Insurance Reporting

Log #: 98-005

Status: Complete

The On-Line Insurance Reporting project makes available a method for electronic reporting of insurance cancellation and new business by insurance companies doing business in Louisiana. The system is designed to support Electronic Data Interchange (EDI). Otherwise, insurance companies would have to provide most of the reporting by magnetic tape or on paper.

Highlights:

- The Louisiana Online Insurance Reporting System was placed into production on January 4, 1999. Since that time, all companies have been moved from a manual reporting scheme which required the records to be reported within 45 days of effective date to an automatic, online reporting system that requires the records to be reported within 3 days of the effective date of the policy.
- Currently all 267 insurance companies licensed to do business within the state are using this E-commerce (EDI), method of reporting. Over 3.8 million vehicles are being reported on.
- By compressing the data, the companies were able to reduce the cost to transmit data by 75%.

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Military Department

Distance Learning Implementation.

Log #: 98-007

Status: Complete

This project provides reasonable access to distance learning facilities for all soldiers in the Louisiana Army National Guard (LA ARNG) and the communities served. This was accomplished by:

- Completing integration with the state university distance learning system for large group requirements, and university classes.
- Completing construction of two Dual Multi-Media Classrooms at Jackson Barracks (New Orleans) and Camp Beauregard/Camp Ball (Alexandria area).
- Completing deployment of Medium Trainer Classrooms at each Battalion/MACOM headquarters, which covers each major city in Louisiana.
- Future Construction of One Multi-Media Classroom in Lafayette.
- Future deployment of Single Trainer Classrooms at each Company/Detachment location.
- Future deployment of Single Trainer Classrooms at the Gillis Long Center (Carville), and Camp Minden (Shreveport area).

The Adjutant General envisions a mature Louisiana National Guard Distance Learning Network consisting of a series of Distributive Training Technology Program (DTTP) sites. These sites would be both owned and shared, interconnected with the National Guard Bureau (NGB) and its regional hubs, which would assure access within one hour's travel (approximately 50 miles) of

every soldier, military unit, and facility. This objective will be accomplished through the implementation of dual-use technology, enhanced force readiness, and C4I (Command, Control, Communications, Computers, and Intelligence) capabilities throughout the state.

Highlights:

- Louisiana was asked to give a presentation on it's DTTP program at the National Distance Learning Conference in San Antonio, TX. Louisiana is the only state meeting all of the Congressional mandates of the program. These mandates include: shared usage with the community, improved command and control, and increased readiness.
- Eighteen of the 64 classrooms planned for the National Guard distance learning network are currently operational resulting in a statewide presence available to the soldiers and citizens of Louisiana; 46 classrooms remain unfunded. Presently, the non-military participation level is averaging about 100 classroom hours with about 40 students a month.
- Nicholls State University's Allied Health Program has begun a First Responder course teaching Emergency Medical Technicians (EMT's) to become Paramedics. Contract negotiations are being conducted with Nicholls to have them provide EMT training to 300 medics in the Louisiana Army National Guard. The Army recently changed the qualification standards for medics; they must now be EMT qualified.
- The Louisiana State Department of Administration has been and is currently using multiple sites to conduct Professional Development courses called Comprehensive Public Training Program (CPTP).
- Louisiana Technical College (Sorrento Campus) has been and is currently using multiple sites to conduct CUED Speech Training. CUED Speech is a method of sign language.
- The National Guard has been steadily increasing in-state usage of the Video Tele-Conferencing (VTC) sites over the past year in preparation for an exercise held this past summer at the National Training Center in California. It is increasingly becoming an important communication tool for Command & Control.
- Video Tele Conferencing has also played a big role in the days and weeks following the events of September 11th. Not only has usage increased for Command & Control purposes inside Louisiana, the VTC system has also allowed key leaders of the Louisiana National Guard to meet with key leaders in Washington D.C. to discuss response plans and actions.
- New Orleans, Lafayette, Alexandria, and the Gillis Long Center in Carville are connected over the ATM backbone for telephone service resulting in additional savings in telephone costs.
- Numerous state agencies, universities and businesses have expressed an interest in utilizing the DLN and video conferencing centers that are available on the network.

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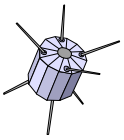

Emergency Preparedness

SkyCell Satellite Terminal

Log #: 98-007c

Status: Complete

This project enhances the capabilities of the Operations/Communications Office of Emergency Preparedness (OEP) to provide, maintain, and support a 24-hour alert and notification system for the state of Louisiana. The system provides fail-safe communications between the OEP, parish Emergency Operation Centers (EOC), and other state and governmental agencies through the use of SkyCell Satellite Terminals.

Specifically, the SkyCell satellite communications system provides:

- Voice, data transfer, fax, multi-point broadcast alerting, and access to Emergency Preparedness.
- Real time video imaging relay to Emergency Preparedness operations.
- Twelve field transportable terminals to communicate with other field terminals or fixed site base stations.
- Ability for Emergency Preparedness to communicate with emerging technology in use at federal agencies and commercial companies.
- Portable units with external antenna for indoor use for each of the 64 parishes.
- Conferencing capabilities with Southeast and Southwest Hurricane Taskforce Parishes.

Highlights:

- Skycell Satellite phones were received and distributed to the parishes in September, 1999.
- The units were an integral part of Year-2000 preparedness. Portable units were distributed to key Governor's office staff and Louisiana State Police.
- FEMA selected the same unit for distribution to all state emergency management offices for Year-2000.
- Portable units were used as backup communications for key state offices supporting Superbowl XXXVI security activities.

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LSU Medical Center

Patient Identification (Biometrics) and Tracking (Bar-coding)

Log #: 98-009

Status: Terminated

This project was proposed to implement a biometric identification system for patient identification and workstation security, as well as a barcode inpatient tracking system.

Project team personnel turnover and technical issues related to Winframe integration resulted in delays of the project and ultimately termination. The Council recommended that the project team reorganize and resubmit a new proposal at such time that these obstacles can be overcome.

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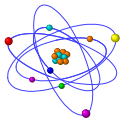

LSU Baton Rouge

Prototype High-Performance Computing System for the State of Louisiana

Log #: 98-010

Status: Complete

This project has established a high-performance computing system in support of numeric and/or data-intensive research, educational, and governmental applications within the state of Louisiana. Some typical scientific applications include: weather predictions and hurricane tracking, materials science, and simulation of astronomical events.

With this system, LSU provides the State of Louisiana with the kind of extensive computing needed to support scientific research. The project implemented the hardware resources necessary to provide a 16-node parallel processing computing complex capable of more than one trillion operations per second to aid in solving complicated problems. The initial pilot provided computing resources for LSU and Louisiana Tech. Upon completion of the pilot effort, the system was opened to other users within higher education and state government.

The project integrates the super-computing component into the existing LSU computing infrastructure and utilizes standard OTM LaNet connectivity to the Asynchronous Transfer Mode state network backbone.

As a result of the project, the state and the academic communities are able to accomplish advanced research projects using computing facilities that did not exist within Louisiana, adding much prestige and benefit to LSU and to those research projects that use it.

Highlights:

- The pilot phase of the Prototype High-Performance Computing System for the State of Louisiana was completed and the facilities are in full operation.
- User enrollment continues to increase. In addition to LSU faculty and graduate students, scientists from La. Tech, Southeastern Louisiana University, and the University of Louisiana at Monroe currently have access to the computing power established by this project.
- Examples of research projects already in-progress are:
  - Astronomers are modeling gaseous disks in spiral galaxies to better understand the dynamics of these objects.
  - Biologists attempting to decipher the phylogenetic (genealogical) relationships of the world's biota are using DNA sequence data analysis, using computationally intensive Bayesian algorithms, in order to select the genealogical tree that most likely describes the true relationships of organisms under study.
  - Chemists are analyzing synchrotron tomography measurements to determine the dispersion properties of flame retardants in polystyrenes.
  - Chemical Engineers specializing in the study of fluid and mass transports in porous materials have developed an algorithm for generating periodic Delaunay tessellations for the characterization of particulate materials. They are now using the algorithm extensively in applied projects which demand a computationally intensive environment for solutions in a matter of minutes.
  - In collaboration with the Schlumberger Corporation, Chemical Engineers are also modeling the flow of reactive, polymeric fluids in hydraulically fractured oil wells.

- Computer Scientists are developing algorithmic, parallel computing, and visualization techniques for high-end computational sciences (10-100 million atom molecular dynamics and 1,000-10,000 electron quantum mechanical simulations) on a Grid of geographically distributed parallel supercomputers and networked virtual environment as well as on future pet flop computers, with applications at the interface of information technology, nanotechnology and biology.
- Computer Scientists are also teaching parallel programming techniques to graduate-level students for use in future research.
- Mechanical Engineers are using the facilities for the simulation of jets in cross flow.
- Statisticians are developing statistical sampling models with applications in many disciplines and developing Data Mining models for Dynamic Advising.

The facilities of this project will serve as a foundation for the deployment of a teraflop cluster to be purchased by the LSU CAPITAL project funded by the 2001 Louisiana Legislature.

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LSU Eunice

Extending the Campus Walls

Log #: 98-016

Status: Complete

The goal of the project was to create a single integrated on-line environment that will provide the student with anytime-anywhere access to the following services:

- Web based access to student data and services.
- Complete access to on-line library resources
- The ability to establish a virtual conferencing area for each section of a course where students and instructors can collaborate on group projects, receive and turn-in assignments, chat and conduct discussion groups on topics.
- The ability to communicate with all campus offices through the use of advanced messaging technologies including voice, email, and group conferencing initiatives.
- The ability to access degree audit and advising information on-line through these same intuitive interfaces in an effort to increase student satisfaction in this area.

"Once students began to hear about the my.LSUE system, it caught on really quickly. Registration via the system is more convenient than having to come on campus to meet with your advisor and schedule classes. The course-specific links allow us to easily keep up with the lectures and continue discussions outside of the classroom. My chemistry instructor is taking full advantage of the technology. We are encouraged to offer and receive assistance on homework problems and other assignments from fellow students through the system. Students who do not have a PC at home love the fact that they are given an e-mail account that is so easy to use. It is also a simple way for non-traditional students to learn to use a computer."

---Catherine Biessenberger; LSUE Student

Access to these services is via a combination of custom designed Kiosks as well as Internet-ready workstations. The true innovation of this proposal is the integration of these services under a single, secure, user-friendly interface while exploiting the capabilities and availability of current campus technologies.

Highlights:

- The system became operational in September, 1999 and is officially known as "my.LSUE." Use of the registration portion of the system contributed to the largest pre-registration totals in LSUE history.
- Selected as the American Association of University Administrators John L. Blackburn Award winner as an exemplary model of administrative leadership in July 2001.
- my.LSUE was selected as the winner of the National Association of CARS Users Annual Software Contest for 2000.
- my.LSUE was profiled in the June 2000 Issue of Converge Magazine
- CARS Information Systems featured my.LSUE in their Winter 2000 newsletter.
- my.LSUE was featured in an article from the Community College Times in their July 11, 2000 issue.
- The LSUE Director of IT has been invited to present a session at the European Association of University Administrators Conference to be held in England, April 2002 regarding the success of my.LSUE system.
- my.LSUE has been the subject of presentations at four national conferences including
  - The Teaching in Higher Education (THE) forum, April 2000
  - The National Association of CARS users, June 2000
  - Noel Levitz National Conference on Student Retention, July 2001
  - American Association of University Administrators, July 2001
- my.LSUE is being considered for recognition under the state's newly formed Exceptional Performance and Gainsharing Incentive Program.

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Department of Wildlife and Fisheries

Web Site Multi-Media

Log #: 98-017

Status: Complete

This project was proposed to use Web-based technology and the Internet to provide an interactive medium for the dissemination of wildlife education topics and information to users in Louisiana and other states. Streamed audio and video deliver information to the public in the form of video news releases, radio show rebroadcasts, interviews, video tours and species profile videos. This service greatly enhances the current system of information dissemination, which involves static, non-interactive web pages, printed media and a weekly radio show. Use of the Internet in this way has been demonstrated to dramatically increase audience figures while also cutting mailing costs.

This project also provides an Internet chat-room available to grade school students from their classrooms. This chat-room can host live discussions on topics such as wildlife conservation and species identification with biologists on hand to answer questions. In addition, the audio and video streams include materials suitable for use in the classroom.

Highlights:

- All phases of the project are now complete. The new Wildlife and Fisheries Web site featuring streaming of multi-media information was launched on 12/27/99
- Audio and video content has been encoded and is now available to the general public.

- Wildlife experts from the department and three technical staff piloted a live chat-room session with children from Northeast Elementary School. Wildlife Topic Chat rooms for students are operational.

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LSU Medical Center at Shreveport

Next Generation-based Internet Videoconferencing for Education, Healthcare, and Administration.

Log #: 99-001

Status: Complete

The specific aims of the project were to: (1) provide gateway technology between the present and the new, internet-based videoconferencing system; (2) build a demonstration testbed for the new, Internet-based videoconferencing technology; (3) migrate the best components of the testbed to a production level system that will be used by the project partners; and (4) produce a report that will be a blueprint that can be replicated efficiently and economically by other education and state agencies.

Highlights:

- With the successful implementation of Objective (1), there is now a means of bridging the current and new Internet-based videoconferencing systems together. This feature will provide a smooth migration path between the different videoconferencing systems as opposed to a forklift replacement of current equipment for new.

- The implementation and operation of both a testbed and production Internet-based videoconferencing network provided great insight into the structure of a network needed to support such an application. Because of the nature of this mode of videoconferencing, it requires an underlying data network that is not congested and one that is not adversely affected by constant data streams. Implementing this technology on a congested network can adversely affect not only videoconferencing performance but also the performance of other data applications traversing the network.

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LSU Baton Rouge/University of New Orleans
Ogden Museum of Southern Art-
The Preservation of Louisiana's Treasures

Log #: 99-004

Status: Complete

Through this project and the Technology Innovation Fund, LSU Computer Services has established itself as a technology resource for assisting other state libraries and museums in creating digital database of art treasures and artifacts.

Additionally, the Louisiana State Museum plans to work with LSU to bring its many art works to the public through the Internet.

This project was used to acquire and use the newest equipment and software in online audio/video streaming, electronic commerce, and digital imaging to create a digital library of the Ogden Museum of Southern Art's visual art collection. The digital library was made available to the public through the Internet. The art works include over 1,466 oil paintings, drawings, watercolors, pastels, black-and-white and color photographs, ceramics, and sculptures either by southern artists or on southern themes. The project builds on the Library of Congress' *American Memories Project* and the U.S. Department of Interior's *Save American Treasures*. The digital library dramatically extends the reach of the museum and encourages new scholarship on southern visual art. These valuable cultural and historical materials are available to art teachers, students, scholars, collectors, donors, and students of southern culture worldwide. The project equipment and technology are now available to assist in digitizing other art treasures.

Highlights:

- All of Roger Ogden's gift has been digitized—about 1,400 artworks. Of these, about 750 have been cataloged for access via the Internet. An additional 200 of a major gift from the family of Will Henry Stevens have been digitized. Additional acquisitions are in process and will also be digitized.
- LSU Computer Services partnered with the Louisiana State Museum in 1999, resulting in the addition of four Louisiana historical photograph collections, totaling 2,500 photographs, for inclusion in the LSU Digital Library. A fifth collection of 400 photographs is in progress.
- LSU Computer Services partnered with the Amistad Research Center to digitize and disseminate in the LSU Digital Library historical documents pertaining to their American Missionaries Collection. The $225,000 aware was funded by the Institute of Museum and Library Services in September, 1999.
- LSU Computer Services partnered with the LSU Libraries Special Collections and the New Orleans Public Library to digitize and disseminate in the LSU Digital Library historical documents pertaining to the Louisiana Purchase. The $220,000 award was funded by the Institute of Museum and Library Services in September, 2000 in celebration of the bicentennial in 2003.
- LSU Computer Services partnered in 2001 with the LSU College of Education, Tulane University, Louisiana State Museum, Louisiana State Archives, Historic New Orleans Collection, and the East Baton Rouge Parish School Board and obtained a grant for $993,000 for three years from the US Department of Education to teach American History in Louisiana. This grant entails using the LSU Digital Library, with primary resources provided by the institutions, in a summer institute for the professional development of K-12 history teachers.

- LSU Computer Services has written a proposal for the Consortia of Louisiana Schools of Architecture to facilitate sharing digital resources in the classroom. Resources will be provided by the faculty and students in four participating schools of architecture and disseminate via the LSU Digital Library.
- LSU Computer Services partnered with the Historic New Orleans Collection in a 2002 grant proposal to the Institute of Museum and Library Services to digitize their historically unique broadside collection and disseminated via the LSU Digital Library.

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University of New Orleans
Spatial Analysis as a Tool for Enhancing Louisiana's Share of Census Derived Federal Revenues

Log #: 99-005

Status: Extension Granted, until May 2002

As the 2000 decennial Census approached, Louisiana was among a number of states that suffered from undercounts in the 1990 Census. Undercounts are costly, since some Federal programs are funded on a per-person basis. The accuracy of the Census was, therefore, a significant fiscal, as well as social, priority for the State. Much of enhancing Census accuracy is a geographic task. Census enumeration, via either the mail-out questionnaire or face-to-face interviews, works best with accurate and up-to-date maps. In 1998, when this project's design became firm, it was clear that there were readily apparent gaps in Census map coverage of urbanized southeast Louisiana. The combined Census map (in red) in the image below is clearly missing some populated enclaves.

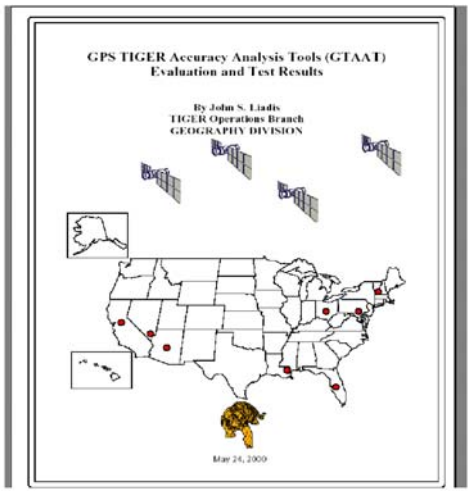
Gaps In The TIGER File Near Mandeville, St. Tammany Parish

The strategy the Laboratory For Information Technology and Spatial Analysis (LITSA) at UNO's College of Urban and Public Affairs followed was to use fine-resolution satellite imagery to validate the Census Bureau's terrain mapping system, called TIGER. The best data source for doing this came from a Russian satellite called SPIN-2. It is designed to make a clear distinction between undisturbed natural areas, and those that show the footprint of human activity.

Highlights:

The project, with respect to the Census, is complete, and successful in four areas.

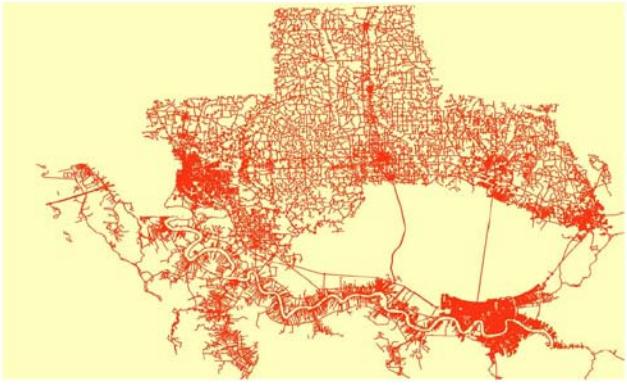
First, the Bureau of the Census responded to concerns, including Louisiana's, about the adequacy of TIGER. The Bureau conducted a massive update of its address files on a nationwide basis. Second, with respect to Louisiana, St. Tammany Parish was included in a special Census project, GTAAT (**GPS TIGER Accuracy Analysis Tools).** Like LITSA, the Census used satellite technology to validate TIGER mapping. Their approach was not based on imaging but on Global Positioning System (GPS) readings taken by ground observers. It is not a coincidence that southeast Louisiana appears in this government study.



Cover of GTAAT Showing St. Tammany Parish and Satellites

The second success lies in the fact that LITSA's methodology, and the results of its investigation, were presented at the 2000 ESRI Users Conference in July of 2000. It is available at: http://www.esri.com/library/userconf/proc00/professional/papers/PAP154/p154.htm

The third success was that the Census did demonstrably improve TIGER coverage of Louisiana's largest urban complex. The improvements were not trivial, and resulted in a fairer count of the State's population.



TIGER 2000 Representation of Urbanized Southeast Louisiana

The fourth success has been the installation of an open-ended capability in UNO's College of Urban and Public Affairs to have a presence in the national and global urban remote-sensing

community. Many of the lessons learned in putting Louisiana under scrutiny with satellite imagery are applicable anywhere in the world. So, the seed money provided by LITSA will continue to bear fruit.

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Health and Hospitals

Telemedicine Partnership with LSUMC to Deliver Health Care Services to Developmentally Disabled Citizens.

Log #: 99-006

Status: Complete

The Policy Board of the state's Comprehensive Public Training Program (CPTP) has commended Secretary Hood of DHH and Assistant Secretary Raymond Jetson of OCDD for developing a supervisory skills curriculum tied to job outcome.

The Department of Health and Hospitals (DHH) in partnership with the LSU Medical Center undertook this project to provide essential medical services to developmentally disabled citizens through the use of telemedicine facilities. DHH is responsible for providing residential health care, therapy, and habilitation for about 1,900 residents with severe and chronic disabilities attributable to mental retardation, cerebral palsy, epilepsy, autism, or closely related conditions in the state's nine development centers. The delivery of medical services is especially complex and expensive because of the multitude of specialty services needed, the difficulty in transporting disabled patients, and the multiple rural locations involved. Transporting residents to medical specialists inflates costs, depletes staff, and may degrade diagnosis and treatment.

This project was intended to provide telemedicine facilities connecting the LSU Medical Center to the nine development centers. Telemedicine is the practice over remote distances of healthcare delivery, diagnosis, consultation, treatment, transfer of medical data, and education using interactive audio, visual, and data communications. The system offers real-time, full-motion and color, multi-point interactivity, and diagnostic quality telemedicine capabilities linking medical service providers to disabled patients at development centers located at: Columbia, Hammond, Leesville, Belle Chase, Bossier City, Pineville, Thibodaux, Ruston, and Iota. In addition to providing medical services in many specialty areas, the LSU Medical Center, through its telecommunications gateway, can also establish contact with renowned resources elsewhere around the country and the world.

Highlights:

- Built a telemedicine network capable of interconnecting with the state's other compressed video systems.
- Designed the telemedicine system to support compressed video on both ISDN (H.320 standard) and IP (H.323 standard) networks.
- Achieved quality telemedicine while sharing bandwidth with data applications, thereby maximizing the capacity of the telecommunications infrastructure.
- Gained experience with the emerging trend of video by IP, and committed to develop the capabilities of the H.323 standard.

- By integrating our own MCU, eliminated the services of an outside video bridge and the associated costs.
- Achieved the network security essential to telemedical confidentiality, even when engaging external sites.
- Produced hundreds of telemedicine events that achieved satisfactory or better results, while minimizing participants' travel and time away from work.
- Discovered the applicability of telemedicine to DHH offices other than OCDD, particularly the Office of Public Health and the Office of Mental Health.
- Established partnerships with educational institutions and the state's Comprehensive Public Training Program to offer opportunities for professional education.
- Expect in time to implement video by IP, thereby delivering telemedicine to the desktops of employees statewide.

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Division of Administration

Office of the Data Base Commission--Louisiana E-Mall

Log #: 99-012

Status: Complete

This project facilitated the state's transformation to digital government and electronic commerce. The Louisiana E-Mall is a turn-key electronic commerce solution designed to provide the means whereby state agencies can offer goods and services to the public over the Internet. Examples of goods and services are: publications, maps, filings, permits, licenses, rentals, etc. The project is a collaborative effort with the Department of the Treasury, the Division of Administration, and multiple other state departments. The state has contracted with an established e-commerce service provider who:

1) Provides Internet host services and operates the proposed E-Mall;
2) Provides tools and facilities for agencies to remotely manage and configure their agency stores;
3) Provides consulting services as needed to assist agencies in designing and implementing their stores and for interacting with agency back-end databases; and
4) Provides tools and support to facilitate Internet-based credit card processing and for interacting with the state designated bank.

The Louisiana E-Mall is designed to be an open-ended solution which will continue to enable other departments and agencies to quickly add additional e-government storefronts making their goods and services conveniently available over the Internet.

Highlights:

- The following agency applications are operational:
  State Register
  Real Estate Commission
  Economic Development
  Department of Transportation and Development

- The payment gateway has been developed and is operational. The Office of Motor Vehicles has two applications using this feature.
- Continuing to work with additional agencies to add their applications to the E-mall.

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Department of Education

Web-Based Data Warehouse System

Log #: 99-014

Status: In Process, 70% Complete

This initiative will implement a Web-accessible data warehouse to improve student achievement and teacher quality by providing educational administrators, principals, and teachers access to the data they need for effective planning and decision making.

The system will provide information from student, staff, financial, and standardized test score data to be accessible 24 hours a day, seven days a week through a desktop with a web browser to all authorized users. For example, data will be provided on:

1) Student information for demographics, grades, courses, discipline records, mobility rates, standardized test results, special ed, etc.;
2) Staff for demographics, staff counts by school, courses and students taught;
3) Financial information for budget by facility, actual to planned expenditures, expenditures by program, function, and object codes.

The system will be used by Department and district staff to develop reports for use by various users (e.g., legislators, congressional leaders, parents, state agencies, and federal agencies).

The Department plans to build the database using existing information and data collection processes that are largely in place. The data warehouse adds significant new functionality to existing systems by extracting localized data and putting it into one central repository where school improvement questions can be answered within minutes rather than months. This will enable educators to shift the focus from "what is happening?" to "what are we going to do about it?"

Highlights:

- Project planning, hardware/software installation, system design, construction and system testing are complete.
- Remaining tasks include training, implementation/acceptance, and warranty.

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LSU Baton Rouge

An X-Band Satellite Ground Station for the State of Louisiana

Log #: 99-015

Status: In process,
Extension granted until March, 2003

Louisiana will be one of six states capable of receiving and processing advanced data streams to be used for continuous on-going surveillance, research, and environmental management. Besides the environmental management benefits, this investment will give Louisiana regional and national leadership in the use and applications development of space-borne environmental science technology. Furthermore, Louisiana's leadership with the X-Band Station is expected to have a positive impact on our economic development efforts as space-borne environmental sciences and applications of this technology both locally, nationally, and world-wide continue to grow.

The new X-band environmental satellite telemetry system will give Louisiana the capability of receiving and processing advanced direct broadcast, high resolution earth environmental information. This real-time access and analysis lends itself to a major decision support role for emergency management, public safety, public health, economic applications, resource management and research/education. The new satellite data acquisitions include Terra MODIS, Radarsat I SAR, ERS-2 SAR and Oceansat-1 OCM data. The SAR (Synthetic Aperture) provides advanced real-time, all-weather day/night satellite-derived environmental data for our state The S and L band antenna systems, previously established in the laboratory, provide NOAA AVHRR, ARGOS and TOVS, Orbview-2 SeaWiFS and GOES GVAR data streams. The new X-band system can provide much more detailed measurements and maps of the earth, oceans and atmosphere on a time-series basis with higher spatial, spectral and radiometric resolutions. The new system will provide the state with a large range of new capabilities such as assessments of storm impacts (flooding, erosion, land-loss), extent of river and coastal flooding, environmental damage/degradation, land-water boundary changes, oil spill movement, harmful algal blooms and agriculture assessments. The new, higher resolution satellite data from MODIS and the Oceansat Ocean Color Monitor will provide time-series "birds eye" views of suspended sediments and phytoplankton blooms downstream of the largest Mississippi River diversions (Davis Pond and Caernarvon). These data could prove essential in the development of innovative management strategies for the diversions, maximizing benefits and minimizing negative impacts. The collected data will be linked via the Internet and managed as a non-profit data resource for Louisiana governmental entities and industry.

Highlights:

The 4.4 meter diameter Xband antenna system installation was performed during the period December 2000 through February 2001. Beginning in the high heat and high humidity portion of the 2001 summer, the antenna developed intermittent problems that were initially attributed to the weather conditions. However, the improving conditions of fall did not solve all the problems. Thus, the Seaspace engineers returned in January 2002 to replace some of the antenna positioner parts. The antenna is now performing well and is receiving Terra MODIS data, Radarsat I data and Oceansat-1 OCM data routinely. The project team is expecting reception of the SAR software by the summer of 2002.

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LSU Baton Rouge

Training Today's Student for Tomorrow's Internet Work Environment

Log #: 99-016

Status: In process,
Extension granted until June, 2002

LSU is developing a system that provides today's school children with experience in using the internet to control, access and operate robotic instruments in the way that they may in tomorrow's high technology network based work environment. This includes internet control interfaces for the Highland Road Park Observatory telescope, for the ATIC balloon-borne "space" experiment and for a HAM radio satellite communication system. In addition, a group of teacher leaders are working with LSU to develop a curriculum that will provide the context and structure necessary for students to use these internet accessed instruments effectively. As part of this project, LSU is partnering with various community and business organizations such as HAM radio operators, amateur astronomers, Southern University, LaSPACE, and a local television station to provide needed expertise and to enhance the quality of the product. The final products of this project will include a set of operational internet "robots," the materials necessary to train teachers in the use of these devices, the supporting classroom materials to be used by students, and an evaluation of the project effectiveness based upon classroom assessments .

Highlights

- Project website and teacher access point has been established at http://www.bro.lsu.edu/.
- All three initial internet instruments have been completed including the hardware interface, website and classroom lessons.
- ATIC balloon experiment component features pictures, video clips, status reports and experiment data from the 2000-2001 flight of the experiment in Antarctica. A 50 minute long television documentary featuring the ATIC experiment and scientific ballooning was also produced, shown on WAFB TV during September, 2001, is being made available to teachers to supplement the ATIC website, and is expected to air on LPB.
- The HAM radio station includes a full web interface to set the radio band, frequency, squelch, antenna position and to hear what the radio receives from anywhere on the internet. Also included is the ability to track satellites and, for licensed HAM operators, the ability to transmit over the radio. Classroom lessons feature learning about satellites and data communication.
- The Telescope component includes a web interface that provides full control of the telescope, the ability to take pictures of astronomical objects, submit a script of multiple objects to target, and online access to archived images and run logs. With this interface teachers can use the telescope from their homes or classroom anywhere on the internet.
- Classroom evaluation of the ATIC and HAM radio components has been completed and evaluation of the telescope component is underway.
- Currently in the process of adding a radio telescope and two more optical telescopes to the system. The optical telescopes will be placed at LIGO in Livingston parish and at the Louisiana School for Math, Science and the Arts in Natchitoeches.
- Project termination date has been extended to 30 June 2002.

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Department of Wildlife and Fisheries

Mobile Data Terminals

Log #: 01-001

Status: Approved

This project will implement a base foundation network to support Mobile Data Terminals (MDT's) for approximately 60 officers/vehicles in the Law Enforcement Division of the Department of Wildlife and Fisheries. MDT's provide agents with a direct link to frequently used sources: the National Crime Information Center, nationwide drivers license files, other natural resource protection agencies, state and local agencies, Fisheries Information Network, the Department of Wildlife and Fisheries Intranet, hunting, fishing, fishery landings, etc.

The immediate availability of relevant, crucial information will improve and increase the current delivery of services to Louisiana citizens and extend services to typically underserved citizens, those that live and work in more rural areas on hard to reach waterways. In addition to online compliance and enforcement functions, the laptop computer serves as an offline computer for report writing, time and attendance reports and crucial statistical information, all of which is captured and compiled in a database used to gauge performance relating to WLF's goals and objectives.

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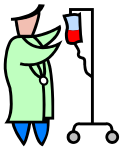

LSU Health Science Center, Shreveport –

Managing Medications and Medical Supplies

Log #: 01-002

Status: Approved

This goals of this project are to 1) save patient lives and improve patient care through reduction of medication errors; 2) create sustainable and measurable cost savings by ensuring that all medications and supplies are appropriately tracked and charged to the patient and by reducing the cost of managing the procurement and distribution of medications and supplies; 3) enhance billing efficiency by interfacing to systems that are currently stand-alone; 4) reduce or re-allocate workforce by reducing manual data entry and manual tracking of medications and supplies.

This project is innovative because of the use of wireless Ethernet Personal Digital Assistants (PDAs) with barcode scanning capability. Although this concept is prevalent in the retail industry, it is a relatively new idea in healthcare. Medications and supplies will be barcoded to enable tracking. A nurse, using a PDA, will scan a patient's barcoded wristband, scan the medication, and scan her ID badge before administering a drug. If the system confirms that the medication being administered is to the right patient at the right dose and at the right time, then the PDA will confirm. The patient's account will then be appropriately charged, the inventory system will be appropriately decremented, and if needed, an electronic order will be placed to the pharmaceutical

wholesale company. A similar process will occur when surgical supplies are expended in the operating room.

Preliminary work has already begun and this project is expected to be complete in the fall of 2003.

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LSU

A Prototype Enterprise Application Hosting Service

Log #: 01-003

Status: Approved

The Ourso College of Business Administration at LSU, in partnership with the Division of Computing Services, the College of Engineering, and SAP America and in collaboration with Southern University College of Business, Tulane University, Productivity Point of Baton Rouge, and St. Joseph's Academy will implement an enterprise applications hosting center to extend the knowledge of the application of emerging technologies and systems. Educators, students, and researchers in the State will have unprecedented access to state-of-the-art technology, tools, applications, methodology, and business best practices. This will enable innovations in business, engineering, computer science education and research.

Anticipated outcome:

- innovative education
- research opportunities
- industry ties
- international recognition
- collaboration between academic, business, and government
- economic development

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Public Safety

State Trooper Mobile Office

Log #: 02-001

Status: Approved

Proposal to equip 650 Louisiana State Police officers with software, printers, and magnetic swipe devices to create an "office environment" within their vehicles. This will reduce the time that a trooper spends returning to his office to complete paperwork, will provide immediate access to current information on-line, and will allow troopers to fill out and print hard copies of special

forms and documents while in the field. It will also allow them to run special training programs on their vehicle laptops during off-peak hours without having to drive to the troop. The increase in trooper patrol time will have a net effect similar to adding troopers to the staff.

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State Fire Marshall

Fire Marshall Information Management System

Log #: 02-002

Status: Approved

This project will provides the ability for the Louisiana Architectural, Engineering, and Construction community ("AEC") as well as the general public to electronically submit construction documents consisting of plans and specifications, addendum, change orders, correspondence, requests for appeals and other construction-related data. It will also provide the AEC the ability to access the status and related information, and to view the progress of plans, resulting in the elimination of delays in construction projects and the negative costs associated with those delays. All information will be retained on one concise database. This system will provide the citizens and businesses of the State of Louisiana electronic communication with the State Fire Marshal's Office via the web; the means of producing quicker and more cost effective correspondence with the AEC and Louisiana citizens; and will facilitate the implementation of a program that can potentially be interconnected with other state agencies and local municipalities around the country.

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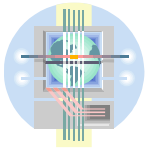

Office of E-Services

LouisianaMAP

Log #: 02-010

Status: Approved

The Louisiana Geographic Information Systems Council in partnership with the Office of Electronic Services will implement a 24 month project to address the State's geographic process issues so that all sectors of Louisiana government, businesses and citizens can effectively and efficiently utilize geographic information and services to enhance their business processes. The strategy is to address the geographic process from an *enterprise* perspective through three complementary, integrated initiatives:

- a comprehensive state plan for production, acquisition, and management of key geographic framework information
- a web-based geospatial portal
- training for the use of the data and geographic services provided through the portal

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Office of E-Services

e-Government Portal

Log #: 02-010

Status: Approved

This project will establish an e-Government web portal so that anyone can access State government in various contexts such as:

- a life event (moving to Louisiana, starting a new job, marriage, death…)
- an intention-based scenario ("how do I renew my driver's license?")
- a member of a community of interest (citizen, state employee, business, non-resident)
- or based on personal preferences (customized view of pre-selected web pages of interest as part of a user profile)

Key existing web assets in state government will be integrated so that information and services responses will be presented in a seamless fashion and without the need to know or understand the State government organizational structure.

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Comprehensive Public Training Program (CPTP)

Statewide Learning Management System

Log #: 02-013

Status: Approved

This project is to acquire and implement a centralized statewide Learning Management System (LMS) that will consolidate existing but separate State employee training databases into one repository for all state employee training data. This will create the foundation for an e-learning environment that will allow CPTP to plan, deliver, track, manage and report all types of employee training, offer a full range of content via custom web-based courses and commercially available courses, and create web-based tests and assessments.

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Office of Information Technology

Prototype for Centralized E-Mail

Log #: 02-014

Status: Approved

At present, individual state agencies are responsible for providing their own e-mail service, which entails significant hardware, software, personnel and training expenses (or outsourcing), results in service quality that varies drastically between departments, and provides no integration of e-mail or calendaring between state departments. This project will seed the implementation of a statewide e-mail line of service based on a cost recovery model. It will entail one centrally managed standard e-mail offering to replace the three primary e-mail software packages currently deployed statewide, and will provide one common e-mail directory and calendaring tool that can be shared by all State employees while at work or via the Web. Agency subscribers will be charged a set price-per-seat that is lower than the costs associated with managing their individual, distributed sites statewide, and quality of service will improve.

Other key benefits anticipated are: 1) to implement an IT line of service that can provide immediate benefit to core business function that encompasses a large base of the state's workforce; 2) to develop a statewide deployment plan that can be used for this and other enterprise services to be offered in the future; 3) to build the technical and support framework through which other desktop lines of service can be offered.

Project Progress Reports

The LTIF guidelines stipulate that each award recipient provide progress reports indicating the status of the project, accomplishments by milestone, and expenditure of funds. The latest progress reports for each of the funded projects can be found at http://www.doa.state.la.us/ltif/ltifprop.htm

APPENDIX I